

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An engine fuel injection apparatus, comprising:
an air chamber provided on an upstream end of an air intake passage of an engine;
and
a fuel injection valve for injecting fuel toward the upstream end of the air intake passage, said fuel injection valve being provided on a wall of said air chamber facing a wall connected to the upstream end of the air intake passage,
wherein said fuel injection valve includes at least an ejection port thereof located inside said air chamber.

2. (Currently Amended) An engine fuel injection apparatus, comprising:
an air chamber provided on an upstream end of an air intake passage of an engine;
and
a fuel injection valve for injecting fuel toward the upstream end of the air intake passage, said fuel injection valve being provided on a wall of said air chamber facing a wall connected to the upstream end of the air intake passage,
wherein all fuel piping and wiring to and from said fuel injection valve are located outside of said air chamber.

3. (Original) The engine fuel injection apparatus according to claim 1, wherein the fuel injection valve provided on the wall of said air chamber is a first fuel injection valve

for high-speed operation of the engine, and the air intake passage is provided with a second fuel injection valve for low-speed operation of the engine.

4. (Original) The engine fuel injection apparatus according to claim 2, wherein the fuel injection valve provided on the wall of said air chamber is a first fuel injection valve for high-speed operation of the engine, and the air intake passage is provided with a second fuel injection valve for low-speed operation of the engine.

5. (Original) The engine fuel injection apparatus according to claim 1, wherein said air chamber also serves as an air cleaner case having a filter element therein.

6. (Original) The engine fuel injection apparatus according to claim 2, wherein said air chamber also serves as an air cleaner case having a filter element therein.

7. (Original) The engine fuel injection apparatus according to claim 3, wherein said air chamber also serves as an air cleaner case having a filter element therein.

8. (Original) The engine fuel injection apparatus according to claim 4, wherein said air chamber also serves as an air cleaner case having a filter element therein.

9. (Original) The engine fuel injection apparatus according to claim 1, wherein the wall of said air chamber is provided with an electric component in the vicinity of said fuel injection valve for controlling said fuel injection valve.

10. (Original) The engine fuel injection apparatus according to claim 2, wherein the wall of said air chamber is provided with an electric component in the vicinity of said fuel injection valve for controlling said fuel injection valve.

11. (Original) The engine fuel injection apparatus according to claim 3, wherein the wall of said air chamber is provided with an electric component in the vicinity of said first fuel injection valve for controlling said fuel injection valve.

12. (Original) The engine fuel injection apparatus according to claim 4, wherein the wall of said air chamber is provided with an electric component in the vicinity of said fuel first injection valve for controlling said fuel injection valve.

13. (Original) The engine fuel injection apparatus according to claim 5, wherein an inspection port is formed on a portion of a wall of the air chamber where the fuel injection valve is not provided, and the inspection port is covered with a removable lid.

14. (Original) The engine fuel injection apparatus according to claim 6, wherein an inspection port is formed on a portion of a wall of the air chamber where the fuel injection valve is not provided, and the inspection port is covered with a removable lid.

15. (Original) The engine fuel injection apparatus according to claim 7, wherein an inspection port is formed on a portion of a wall of the air chamber where the fuel injection valve is not provided, and the inspection port is covered with a removable lid.

16. (Original) The engine fuel injection apparatus according to claim 8, wherein an inspection port is formed on a portion of a wall of the air chamber where the fuel injection valve is not provided, and the inspection port is covered with a removable lid.

17. (Currently Amended) A fuel injection apparatus for an engine, comprising:
an air chamber;
an intake passage of the engine, said intake passage of the engine extending through a first wall of said air chamber; and
a fuel injection valve for injecting fuel toward an upstream end of said air intake passage, said fuel injection valve being provided on a second wall of said air chamber, said second wall being located opposite to said first wall,

wherein said fuel injection valve includes at least an ejection port thereof located inside said air chamber.

18. (Original) The fuel injection apparatus according to claim 17, wherein the fuel injection valve provided on the second wall of said air chamber is a first fuel injection valve for high-speed operation of the engine, and said air intake passage is provided with a second fuel injection valve for low-speed operation of the engine.

19. (Original) The fuel injection apparatus according to claim 17, wherein said air chamber also serves as an air cleaner case having a filter element therein.

20. (Original) The fuel injection apparatus according to claim 17, wherein the second wall of said air chamber is provided with an electric component in the vicinity of said fuel injection valve for controlling said fuel injection valve.

21. (Original) The fuel injection apparatus according to claim 20, wherein an inspection port is formed on a portion of a wall of the air chamber where said fuel injection valve is not provided, and the inspection port is covered with a removable lid.

22. (New) The engine fuel injection apparatus according to claim 1, wherein all fuel piping and wiring to and from said fuel injection valve are located outside of said air chamber.

23. (New) The fuel injection apparatus according to claim 17, wherein all fuel piping and wiring to and from said fuel injection valve are located outside of said air chamber.

24. (New) The engine fuel injection apparatus according to claim 1, further comprising a fuel pump, wherein fuel feed pipes from the fuel pump and the fuel injection valve extend through a gap between a rear wall of the air chamber and a front wall of a fuel tank.

25. (New) The engine fuel injection apparatus according to claim 2, further comprising a fuel pump, wherein fuel feed pipes from the fuel pump and the fuel injection valve extend through a gap between a rear wall of the air chamber and a front wall of a fuel tank.

26. (New) The fuel injection apparatus according to claim 17, further comprising a fuel pump, wherein fuel feed pipes from the fuel pump and the fuel injection valve extend through a gap between a rear wall of the air chamber and a front wall of a fuel tank.

27. (New) An engine fuel injection apparatus, comprising:
an air chamber provided on an upstream end of an air intake passage of an engine;

a first fuel injection valve for injecting fuel toward the upstream end of the air intake passage, said fuel injection valve being provided on a wall of said air chamber facing a wall connected to the upstream end of the air intake passage;

a second fuel injection valve disposed on said air intake passage.

28. (New) The engine fuel injection apparatus according to claim 27, wherein the fuel injection valve provided on the wall of said air chamber is a first fuel injection valve for high-speed operation of the engine, and the air intake passage is provided with a second fuel injection valve for low-speed operation of the engine.

29. (New) The engine fuel injection apparatus according to claim 27, wherein said air chamber also serves as an air cleaner case having a filter element therein.

30. (New) The engine fuel injection apparatus according to claim 27, wherein the wall of said air chamber is provided with an electric component in the vicinity of said fuel injection valve for controlling said fuel injection valve.

31. (New) The engine fuel injection apparatus according to claim 29, wherein an inspection port is formed on a portion of a wall of the air chamber where the fuel injection valve is not provided, and the inspection port is covered with a removable lid.

32. (New) An engine fuel injection apparatus, comprising:
an air chamber provided on an upstream end of an air intake passage of an engine;
a first fuel injection valve for injecting fuel toward the upstream end of the air intake passage, said fuel injection valve being provided on a wall of said air chamber facing a wall connected to the upstream end of the air intake passage;
a second fuel injection valve disposed at a level lower than said first fuel injection valve.

33. (New) The engine fuel injection apparatus according to claim 32, wherein the fuel injection valve provided on the wall of said air chamber is a first fuel injection valve for high-speed operation of the engine, and the air intake passage is provided with a second fuel injection valve for low-speed operation of the engine.

34. (New) The engine fuel injection apparatus according to claim 32, wherein said air chamber also serves as an air cleaner case having a filter element therein.

35. (New) The engine fuel injection apparatus according to claim 32, wherein the wall of said air chamber is provided with an electric component in the vicinity of said fuel injection valve for controlling said fuel injection valve.

36. (New) The engine fuel injection apparatus according to claim 34, wherein an inspection port is formed on a portion of a wall of the air chamber where the fuel injection valve is not provided, and the inspection port is covered with a removable lid.